Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Digital Audio Broadcasting Systems And Their Impact on the Terrestrial Radio Broadcast Service.	)	MM Docket No. 99-325

COMMENTS OF iBIQUITY DIGITAL CORPORATION CONCERNING NIGHTTIME AM IBOC SERVICE

iBiquity Digital Corporation ("iBiquity"), by its attorneys, hereby submits its comments in response to the Media Bureau's recent Public Notice concerning the introduction of nighttime AM IBOC service.[1] iBiquity strongly supports the National Association of Broadcasters ("NAB") recommendation that the Commission authorize AM broadcasters to commence nighttime service.[2] iBiquity further urges the Media Bureau to expand the existing interim authorization for IBOC to allow AM stations to commence nighttime broadcasts.

1. Background

The NAB Recommendation was based on the work of an Ad Hoc Technical Group ("Technical Group") that analyzed a series of test reports and analytical studies iBiquity prepared in consultation with the Technical Group. Based on this work, the Technical Group

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1 *Comment Sought on Use of Digital AM Transmissions During Nighttime Hours*, Public Notice, DA 04-1007, MM Docket No. 99-325 (rel. April 14, 2004).

2 *See* Letter from Jack N. Goodman to Ms. Marlene H. Dortch dated March 5, 2004 ("NAB Recommendation").

recommended that the Commission authorize nighttime IBOC service with the proviso that the FCC would need to address unanticipated interference issues on a case-by-case basis. iBiquity worked closely with the Technical Group to supply information about the operation of iBiquity's AM HD Radio™ system, to conduct recommended tests and to answer questions during the Technical Group's evaluation of the test results. The Technical Group's conclusions were presented to a broad cross section of the radio industry and approved by the NAB Radio Board. The Technical Group and the Radio Board recognized that nighttime AM HD Radio service will lead to some level of increased interference for analog AM service. Both groups recognized, however, the need of AM broadcasters to transition to a digital future. The groups concluded that the benefits of IBOC technology in the short term and in the long term far outweigh any short term interference concerns that broadcasters may have.

2. <u>The Public Will Benefit from Nighttime AM IBOC Service</u>

The AM HD Radio system offers the possibility of revitalizing AM broadcasting. Tests previously submitted to the Commission in this proceeding demonstrated the AM HD Radio system's ability to provide more robustness than can be provided by the existing analog AM service.[3] Recent tests iBiquity conducted with the National Radio Systems Committee ("NRSC") have conclusively demonstrated that the AM HD Radio system, operating in either the "core" or the "enhanced" mode, provides audio quality that far exceeds analog AM quality and approaches FM audio quality. This dramatically improved audio quality means that AM broadcasters will be able to introduce new competitive formats, such as music formats, that largely have been abandoned for AM radio.

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[3] *See* Third Report to the National Radio Systems Committee, AM IBOC DAB Laboratory and Field Testing, dated Jan. 4, 2002.

New music formats cannot survive on AM, however, if they are limited only to daytime hours. Listeners will not understand why the station audio quality changes from digital stereo to monophonic analog when the sun sets. The drop in audio quality at night will drive listeners away from any new music format just as FM stereo caused AM stations to drop music formats 40 years ago. As a result, it is unlikely that stations will invest capital in any effort to attract new listeners with a new music format if it is limited to daytime hours. If the Commission wants broadcasters and the listening public to benefit from the audio quality upgrade of AM IBOC technology, the Commission needs to expand the existing AM authorization to include nighttime service. Without a nighttime authorization, AM stations will not be able to implement new formats and will be denied this avenue for more effective competition with higher quality sources of information and entertainment. iBiquity encourages the Bureau to foster the transition of AM to digital by immediately authorizing nighttime digital broadcasts.

3. The Tests Analyzed by the NAB Demonstrate the Feasibility of Introducing Nationwide Nighttime AM IBOC Service

The reports analyzed by the Technical Group demonstrated that the greatest danger of nighttime AM IBOC interference exists in areas that already suffer from some level of analog interference. The reports conclude that analog groundwave service is most likely to experience any impact from digital service outside the Nighttime Interference Free contour of the station. In most cases, this area at night is beyond the accepted range of listenership. Generally, interference in this peripheral area should have a minimal impact on the station's listeners and on the station's revenues.

Digital interference to analog skywave service is somewhat more difficult to anticipate. Analog skywave signals are inherently unpredictable. Signal strength can change radically in a matter of seconds. Because it is difficult to predict skywave signal strength at a particular

location, it is difficult to forecast any impact from digital service at night. The tests demonstrate, however, that digital AM service will not eliminate skywave service but will reduce their availability depending on atmospheric conditions and the location of the listener.

It is important to note the tests analyzed by the Technical Group illustrate the theoretical potential impact from IBOC when all stations have converted to digital broadcasts but no digital receivers were in use. iBiquity anticipates that the process of converting AM stations will take many years. During that time, consumers will acquire digital receivers and will no longer depend on analog broadcasts. Thus, over time, the impact from any IBOC interference to analog will diminish as more and more listeners are using digital rather than analog receivers. Thus, listeners will never encounter in the real world the interference levels considered in iBiquity's tests.

The test reports demonstrate the feasibility of nighttime digital broadcasts. The tests acknowledge there will be areas of increased interference from IBOC and certain classes of stations will experience an impact on their analog service but the vast majority of stations should have little or no impact from digital service. Based on these reports, the Commission should be confident that its authorization of nighttime AM IBOC service will not present problems for the majority of AM broadcasters.

4. iBiquity Endorses the NAB Proposal that the Commission Address Unanticipated Interference Problems on a Case-By-Case Basis

iBiquity believes the Commission's existing procedures provide sufficient means for addressing any situations involving unanticipated levels of interference from the introduction of nighttime AM HD Radio broadcasts. As is the current situation with daytime AM service, the Commission should encourage stations to work together to resolve any problematic levels of nighttime interference. iBiquity encourages the Commission to afford broadcasters the authority

to reduce digital power levels, if necessary, to ameliorate interference without the need for advanced Commission authorization of any power reduction.[4] iBiquity believes, in the majority of cases, interference concerns can be addressed through discussions among any affected stations. Nonetheless, the Commission's existing complaint process provides an effective means for addressing any interference situations that are not resolved between stations.

5. Conclusion

Based on the existing record concerning nighttime AM IBOC, iBiquity encourages the Commission to authorize all stations to provide HD Radio broadcasts during all hours of analog broadcasting. iBiquity supports the Media Bureau's proposal to expand the existing interim authorization for IBOC to include nighttime AM IBOC broadcasts and encourages the Bureau to immediately take this step in order to provide the successful rollout of HD Radio technology. Finally, iBiquity advocates that the Bureau authorize nighttime AM IBOC broadcasts for all stations on a blanket basis and without the need for special temporary authority or experimental authorization.

Respectfully submitted,

/s/
Albert Shuldiner
Senior Vice President and General Counsel
iBiquity Digital Corporation
8865 Stanford Boulevard
Suite 202
Columbia, MD 21045
(410) 872-1536

/s/
Robert A. Mazer
Vinson & Elkins L.L.P.
1455 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 639-6500

Counsel for iBiquity Digital Corporation

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[4] *See Digital Audio Broadcasting Systems And Their Impact on the Terrestrial Radio Broadcast Service*, MM Docket No. 99-325, *First Report and Order* (Oct. 11, 2002) at ¶¶ 27-29 (authorizing daytime power reductions to address instances of reference).